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A NEW PARASITIC MUSCOID FLY FROM TEXAS.¹

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The new species of *Sarcophaga* described below was reared from adult Mantids by Dr. O. P. Breland, who in the following paper presents some biological observations on the same.

Sarcophaga austinana, n. sp.

Similar to *Sarcophaga (Mantidophaga) stagemantidis* Towns., but differs in having the cheek grooves and frontal stripe wholly black and the female lacks apical scutellar bristles. The species has the essential characters of Aldrich's Group D (*Sarcophaga* and Allies, p. 113) and is apparently the first southwestern form to be recorded from a Mantid host.

Male.—Front narrowed before ocellar triangle, 0.157 of head width (average of three: 0.163; 0.161; 0.147); parafrontals cinereous pollinose on black ground color; frontal vitta velvety black, slightly narrowed behind but wider than parafrontal on entire length; inner verticals well developed, outer ones vestigial; ocellars not very strong, proclinate; frontals in a single row, moderately divergent beneath antennal base and descending nearly to level with apex of second segment; face blackish gray pollinose, not deeply impressed, its lateral ridges finely haired on lower two-fifths; vibrissae strong, decussate, near oral margin; antennae black, third segment hardly twice length of second, reaching to lower fourth of face; arista blackish, long plumose to middle and thickened on proximal fourth; parafacial black, gray pollinose, with a double row of hairs along outer margin, inner row larger, almost bristly; cheek cinereous pollinose on black ground color, nearly one-third eye height; proboscis short, stout; palpi black, upturned and slightly thickened beyond middle; eyes bare, descending about to vibrissal level; back of head gray pollinose, clothed with black hairs intermixed with pale pile below middle.

Thorax black, gray pollinose, with the usual three to five black vittae on notum. Chaetotaxy: acrostichal 2, 3; dorsocentral 3, 3; intraalar 2 (none near

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suture); supraalar 3; postalar 2; notopleural 4; presutural 2; posthumeral 2; humeral 3; sternopleural 3 (in a row); scutellum with 2 lateral, 1 smaller decusate apical and 1 discal pair well behind middle; infrascutellum recessive; propleura and prosternum bare; calypters subopaque, with a rather uniform blackish tinge.

Abdomen wholly black, gray pollinose, tessellated with a distinct median black vitta; first segment without, second with a pair of median marginals; third with a median marginal pair and 4 or 5 laterals; anal segment with a complete marginal row; hypopygium reddish yellow; first segment small, with a row of 6 to 8 slender bristles on hind margin above; second segment globose but not very large, with numerous erect smallish hairs and two stronger bristles near middle behind; forceps yellow, rather short and uniformly curved forward, terminating in a sharp point, hind side with a small but distinct barblike projection slightly beyond the inward basal curvature; viewed from behind the forceps are thin, divided but hardly at all divergent apically, the inner margin of each forcep is slightly raised to form a sharp median keel; accessory plate yellow, slender and curved backward against forceps; both claspers well developed, hind pair strongly hooked at tip, the anterior somewhat shorter and thicker with an obliquely rounded tip; penis wholly shining black, jointed near middle, distal segment slightly enlarged bearing a blackish pale-margined earlike lobe on each side at apex; fifth sternite black, with a broad V-shaped apical incision, lobes clothed with fine hairs and pale pubescence along inner margin.

Legs black; middle femur with short comb; middle tibia with two anterodorsal bristles; hind tibia not villous; claws and pulvilli elongated, latter considerably infuscated.

Wings hyaline but with an apparent blackish tinge basad of small cross vein; first vein with longish coarse hairs on middle part, third setulose almost to small cross vein; apical cell open far before wing tip; costal spine strong; epaulets black.

Female.—Front at vertex 0.292 of head width (average of three: 0.278; 0.301; 0.297), widening gradually downward to antennal base; two pairs of proclinate orbitals and outer verticals developed; apical scutellars absent; abdomen truncate at apex as viewed from above; median marginals on second segment weak and usually depressed; genital segment black, the apical margin beset with a row of slender black hairs; fifth sternite black, dusted with gray pollen, the sixth terminating in a reddish yellow chitinized larvipositor, which is bowed forward, grooved behind and tapers to a blunt tip; claws and pulvilli short.

Length: Male, 8-9 mm.; female, 6.5-7 mm.

Holotype: Male, Austin, Texas, October 13, 1941 (O. P. Breland). Allotype: Female same data as type. Paratypes: two males and six females same data as type, one male and four females, San Marcos, Texas, October 11, 1941 (O. P. Breland). Holotype and Allotype in U. S. National Museum; six paratypes in my collection, the remainder returned to Dr. O. P. Breland.